AMENDMENTS TO THE CLAIMS:

1.   (Currently Amended) A method for supporting downlink JD (joint detection) in a TDD CDMA communication network system, comprising:

[[(a)]] judging whether the CAI (code allocation information) in a downlink timeslot will change in the next TTI (transmission time interval);

[[(b)]] inserting the changed CAI as a specific control information into a specified field in the traffic burst in the downlink timeslot corresponding to current TTI if the CAI will change;

[[(c)]] sending the traffic burst containing the specific control information to each UE (user equipment) in the downlink timeslot via a downlink channel.

2.   (Original) The method of claim 1, further comprising:

when establishing connection with a UE, the network system sends the initial CAI to the UE.

3.   (Currently Amended) The method of claim 2, wherein ~~step (a)~~ judging further includes:

[[(a1)]]   judging that the CAI changes if at least one active UE leaves the downlink timeslot;

[[(a2)]]   reclaiming the spreading code resource released by the UE;

wherein the changed CAI in step [[(b)]] of inserting is the CAI after the spreading

code resource is reclaimed.

4.   (Currently Amended) The method of claim 2, wherein step (a) judging further includes:

[[(a1)]]   judging that the CAI changes if at least one UE joins the downlink

timeslot;

[[(a2)]]   allocating spreading code resource to the UE;

wherein the changed CAI in step [[(b)]] of inserting is the CAI after the spreading

code resource is allocated.

5.   (Currently Amended) The method of claim 2, wherein step (a) judging further includes:

[[(a1)]]   judging that the CAI changes if the spreading code resource in the

downlink timeslot is reallocated to realize optimized configuration of the resource in the

downlink timeslot;

wherein the changed CAI in step [[(b)]] of inserting is the CAI after the spreading code

resource is reallocated.

6.   (Previously Presented) The method in claim 1, wherein the specific control information

allows each UE in the downlink timeslot to perform one of the two JD methods of ZF-BLE and

MMSE-BLE.

7.   (Currently Amended) A method for supporting downlink JD to be performed by a UE

in a TDD CDMA communication system, comprising steps of:

[[(i)]] receiving a traffic burst in a downlink timeslot transferred by the network system

via downlink channel;

[[(ii)]] detecting whether the traffic burst contains the CAI in the next TTI in the

downlink timeslot;

[[(iii)]]   extracting the CAI if the traffic burst contains the CAI;

[[(iv)]]   performing next-phase JD algorithm to decrease interference by using the

CAI.

8.   (Original) The method of claim 7, further comprising:

the UE receives the initial CAI from the network system when the UE establishes

connection with the network system.

9.   (Original) The method of claim 8, wherein the JD algorithm is one of ZF-BLE and

MMSE-BLE.

10.   (Currently Amended) A method for supporting downlink single-user JD in a TDD

CDMA communication network system, comprising steps of:

[[(a)]] judging whether the ACN (active code number) in a downlink timeslot will change in the next TTI;

[[(b)]] inserting the changed ACN as a specific control information into a specified field in the traffic burst in downlink timeslot corresponding to current TTI if the ACN will change;

[[(c)]] sending the traffic burst containing the specific control information to each UE in the downlink timeslot via downlink channel.

11.   (Original) The method of claim 10, further comprising:

the network system send the initial ACN to the UE when the network system establishes connection with the UE.

12.   (Original) The method of claim 11, wherein the specific control information allows each UE in the downlink timeslot to perform an MMSE-BLE-SD-JD algorithm.

13.   (Currently Amended) A method performed by a UE for supporting downlink single-user JD in a TDD CDMA communication system, comprising steps of:

[[(i)]] receiving a traffic burst transferred by the network system via downlink channel in a downlink timeslot;

[[(ii)]] detecting whether the traffic burst contains the ACN in the next TTI in the downlink timeslot;

[[(iii)]]   extracting the ACN if the traffic burst contains the ACN;

[[(iv)]]   performing the next-phase JD algorithm to decrease interference by using the ACN.

14.   (Original) The method of claim 13, wherein the step to be taken before step (i) further includes:

the UE receives the initial ACN from the network system when the UE establishes connection with the network system.

15.   (Original) The method of claim 14, wherein the JD method is an MMSE-BLE-SD method.

16.   (Original) A network system for supporting downlink JD, comprising:

a judging unit, for judging whether the CAI in a downlink timeslot will change in the next TTI;

an inserting unit, for inserting the changed CAI as a specific control information into a specified filed in the traffic burst in downlink timeslot corresponding to current TTI when the CAI changes;

a sending unit, for sending the traffic burst containing the specific control information to each UE in the downlink timeslot via a downlink channel.

17.   (Original) The network system of claim 16, wherein the sending unit sends the initial CAI to the UE when establishing connection with the UE.

18.   (Original) The network system of claim 16, wherein the judging unit judges that the CAI changes if at least one active UE leaves the downlink timeslot or at least one UE joins the downlink timeslot or the spreading code resource in the downlink timeslot is reallocated.

19.   (Original) A UE for supporting downlink JD, comprising:

a receiving unit, for receiving a traffic burst transferred by the network system via downlink channel in a downlink timeslot;

a detecting unit, for detecting whether the traffic burst contains the CAI in the next TTI in the downlink timeslot;

an extracting unit, for extracting the CAI when the traffic burst contains the CAI;

a performing unit, for performing next-phase JD algorithm to decrease interference by using the CAI.

20.   (Original) The user equipment of claim 19, wherein the receiving unit receives the initial CAI from the network system when establishing connection with the network.

21.   (Original) A network system for supporting downlink single-user JD, comprising:

a judging unit, for judging whether the ACN in a downlink timeslot will change in the next TTI;

a specified filed in the traffic burst in the downlink timeslot corresponding to current TTI when the ACN changes;

a sending unit, for sending the traffic burst containing the specific control information to each UE in the downlink timeslot via downlink channel.

22.   (Original) The network system of claim 21, wherein the sending unit sends the initial ACN to the UE when establishing connection with the UE.

23.   (Original) A UE for supporting downlink single-user JD, comprising:

a receiving unit, for receiving a traffic burst transferred by the network system via downlink channel in a downlink timeslot;

a detecting unit, for detecting whether the traffic burst contains the ACN in the downlink timeslot in the next TTI;

an extracting unit, for extracting the ACN when the traffic burst contains the ACN;

a performing unit, for performing next-phase single-user JD algorithm to decrease interference by using the ACN.

24.   (Original) The UE of claim 23, wherein the receiving unit receives the initial ACN from the network system.